

## VIII. SUMMARY OF TECHNICAL CONCLUSIONS

The following key conclusions can be drawn from the analysis of the 1997–1998 CABG data submitted by California hospitals:

- Raw unadjusted mortality rates give a false impression of a hospital's relative performance, reinforcing the importance of risk–adjustment in making comparisons across hospitals.
- There is wide variation among California hospitals in their mortality rates for isolated coronary artery bypass graft surgery, even after adjusting for differences in patient severity.
- The high degree of agreement between the actual and predicted number of deaths (as discussed in the **Technical Methods** section, Appendix F) underscores that hospitals should not exclude high–risk patients from appropriate CABG surgeries to improve their risk–adjusted performance scores.
- An examination of the relationship between volume of CABG procedures and outcome finds large variation in the performance results of small-volume hospitals and small variation in the performance results of large-volume hospitals.

One caveat to note is that because CCMRP did not have data from the 38 non-participating hospitals, direct comparison of risk–adjusted mortality rates is not possible. However, an examination of OSHPD hospital discharge data shows that the aggregated raw or unadjusted mortality rates for participating hospitals are essentially identical to those of non–participating hospitals. On average, participating hospitals performed more CABG surgeries than non–participating hospitals (250 per year vs. 209 per year).

**One year's results—especially among hospitals with small annual volumes of CABG surgeries—are not sufficient for drawing definitive conclusions about the performance of any given hospital. It will be important to evaluate the performance of hospitals over multiple years to determine whether there is a consistent pattern of performance, either good or bad.**

PBGH and OSHPD wish to thank each of the 79 hospitals that volunteered to participate and publicly report their risk–adjusted mortality rates for the 1997–1998 data collection period. It is important to recognize that, regardless of any individual hospital's performance results, participation in CCMRP represents a significant commitment to quality measurement and improvement by each of the participating hospitals.

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